

# BPTCS/BNCS Special Committee on Use of Additive Manufacturing

Remarks by

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Additive Manufacturing For Reactor Materials & Components  
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# Who and What

- BPTCS – Board on Pressure Technology Codes and Standards
  - Management of all ASME activities related to codes, standards, guidelines, and accreditation programs directly applicable to nonnuclear pressure containing equipment
- BNCS – Board of Nuclear Codes and Standards
  - Management of all ASME activities related to codes, standards and guides directly applicable to nuclear facilities and technology

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# Charter

- Special committee appointed June 2017
- To develop a technical baseline to support development of a proposed Boiler and Pressure Vessel standard or guideline addressing the pressure integrity governing the construction of pressure retaining equipment by additive manufacturing processes
  - Construction, as used in this Charter, is limited to materials, design, fabrication, examination, inspection, and testing.

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# Scope

- Perform gap analysis, evaluate results, and make recommendations for potential incorporation of additive manufacturing (AM) processes in ASME Codes to construct pressure retaining equipment.

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# Current activities

- Will recommend a multi-year task plan for developing baseline to support standards development
- The plan will include
  - Development of relevant data and other information required to complete the gap analysis, evaluate results, and make recommendations
  - Current, nationally recognized AM standards will be used to support the deliverable
  - Input will be requested from BPV service committees
    - NDE (BPV V)
    - Welding Brazing and Fusing (BPV IX)
    - Materials (BPV II)

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# Current activities

- Preparation of future ASME requirements for AM pressure equipment will consider information or data from the America Makes\* and ANSI standards effort.
- Committee will be meeting on a regular basis and will be looking for subject matter experts for the committee – NRC staff will be represented
- The final approved revisions or additions to the Boiler and Pressure Vessel Code will be applicable to Nuclear and non-nuclear pressure vessels and components

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\*America Makes is the nation's leading and collaborative partner in additive manufacturing (AM) and 3D printing (3DP) technology research, discovery, creation, and innovation.